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The effect of diagnostic labels on the affective responses of college students towards peers with 'Asperger Syndrome' and 'Autism Spectrum Disorder'.

Abstract:

Given the removal of Asperger Syndrome (AS) label in DSM5, the impact of clinical labels upon the affective responses of college students was explored. 120 college students read two vignettes depicting social interactions typical of a person with Autism Spectrum Disorder (ASD). In one vignette they were informed the character was a typical college student and in the other, the character had a clinical disorder (either ASD, AS or Schizophrenia).

Participants' affective responses were measured on the Positive And Negative Affect Scale (PANAS). No significant differences in positive and negative affective responses were found between the clinical labels. However, affective responses were significantly more positive and less negative towards behaviors associated with clinical groups compared to the typical college student.

Keywords: Autism Spectrum Disorder; Asperger Syndrome; label; affective response.

The latest edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM5; APA, 2013) has made significant revisions to the way Autism Spectrum Disorders (ASD) are conceptualised. The modifications are aimed at improving diagnostic sensitivity and validity and reflect the heterogeneity of ASD (Bultas & Koetting, 2014). The most significant and controversial amendment is the merging of four separate disorders: “autistic disorder”, “Asperger’s Syndrome”, “pervasive developmental disorder not otherwise specified”, and “childhood disintegrative disorder” into the single diagnosis - autism spectrum disorders (Mandy, 2013). The removal of these diagnostic labels, particularly Asperger’s syndrome (AS), has been met with some concern from those affected, researchers and professionals (Hazen, McDougle & Volkmar, 2013). AS is often conceptualised as a mild form of autism or a manifestation of autism in people of normal intellectual ability (Woodbury-Smith & Volkmar, 2009) and it has been proposed that this diagnostic label may have utility for those affected (Mandy, 2013). Many young people and their parents feel more comfortable with the label AS and strongly object to the loss of this label (Butler & Gillis, 2011; Calzada, Pitstrang, & Mandy, 2013; Giles, 2014; Linton, Krcek, Sensui, & Spillers, 2014; Spillers, Sensui, & Linton, 2014). For example, an online petition was organised to challenge the removal of subgroups and was signed by over 9000 people (The Global and Regional Asperger’s Syndrome Partnership, 2012). Also in 2010 the Asperger’s Association of New England proposed the AS label clearly differentiated those who were ‘less severe’ from the more severe and stigmatised autism group (Ben-Zeev et al., 2010). Stigma is a process that has been conceptualised as being initiated by the identification and labelling of difference that links to a stereotype with negative characteristics, and the labelling then distinguishes a ‘them and us’ separation (see Link and Phelan, 2001; 2006). Stigma research has tended to focus upon mental illness generally or Schizophrenia as a specific example, however, there is a paucity of literature on stigmatization of adults with Asperger's Disorder (Angermeyer and Dietrich, 2006; Butler & Gillis, 2011). What research there is has suggested that whilst there may be less stigma attached to the label AS compared to autism, there is also confusion between these diagnoses with some parents reporting they felt autism was better understood than AS (Calzada et al., 2011; Kite, Gullifer, & Tyson, 2012; Mandy 2013).

One area where the removal of the AS label is particularly relevant is higher education as there was a surge in diagnosis of people diagnosed with AS in the 1990s and these

individuals are now approaching university age (Van Bergeijk, Klin & Volkmar, 2008). The number of students attending university with AS is increasing, in 2003/04 it was estimated to be 1.8% and by 2007/08 this had risen to 2.4% and seems to be consistently increasing year by year (Fleischer, 2012; MacLoed & Green, 2009). Typically, people with AS have difficulty with the social demands of university life and one significant moderator for academic and social success for students with ASD is peer attitudes (Nevill & White, 2011). Many people with AS are reluctant to disclose their disability for fear of negative attitudes from peers (Adreon & Durocher, 2007). The worries and concerns of people on the spectrum transferring to university reflect a contradiction in requiring support but not wanting to compromise opportunities to develop friendships and socialize (Galligan, Feinstein, Sulkes, Bisagno, & Stein, 2013; Fletcher et al., *in press*). This may be based upon childhood experiences as children are less accepting of a peer with ASD than a typically developing peer (Campbell, Ferguson, Herzinger, Jackson, & Marino, 2005; Harnum, Duffy & Ferguson, 2006). However, for young adults at university, there is evidence that college students have a more positive attitude towards someone performing mild social digressions when the person is labelled 'High Functioning Autism (HFA)' than when they are labelled a typical student (Matthews et al., 2013). Previous research suggests a greater understanding of the disorder tends to result in fewer negative attitudes (Corrigan, Kerr & Knudsen, 2005; Mayville & Penn, 1998; Nevill & White, 2011). The focus of the present study was therefore not to replicate the investigations of how those with AS perceive the stigma associated with the labels (AS and ASD; e.g. Davidson & Henderson, 2010; Shtayermmana, 2009), rather to investigate how potential peers (without AS) respond to the labels, as this is an important aspect in the onset of stigmatization.

The present study had three questions: 1) Do college students respond differently to an AS label compared to an ASD label; 2) Do college students respond differently to those with a clinical label compared to typical students; and 3) Does knowledge of ASD impact upon these responses. The labels AS and ASD were contrasted with Schizophrenia. Schizophrenia and ASD have behavioural overlaps, as they both share deficits in social interaction, emotional processing and executive functioning (Meyer et al., 2011). Furthermore, schizophrenia provides an interesting comparison, as it is one of the most highly stigmatized disorders (Graves, Cassisi & Penn, 2005).

## Methods

### Participants

A total of 120 students ( $M = 55$ ,  $F = 65$ ) completed an online study. Participants were recruited via opportunity sample via university bulletin boards and social networking sites that were only accessible to current students. The only inclusion criterion was that participants were currently students and they had to identify their current university and course and provide a university-based email (not retained to ensure data was anonymous). No participants reported having ASD. See Table 1 for demographic information.

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Table 1 about here

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The participants were randomised into three clinical label conditions. Forty were shown the clinical label ‘Asperger’s Syndrome’ (AS condition), of which 19 were female and 21 were male ( $M_{\text{age}} = 21.93$  years,  $SD = 2.11$ ). A further 40 were shown ‘Autism Spectrum Disorder’ (ASD condition), 21 females and 19 males, ( $M_{\text{age}} = 21.63$  years,  $SD = 1.64$ ). The remaining 40 were shown ‘Schizophrenia’ (Schizophrenia condition), 25 females and 15 males ( $M_{\text{age}} = 21.60$  years,  $SD = 2.72$ ). The demographics of the participants in each condition did not significantly differ (all  $p > .05$ ).

### Materials

An online questionnaire was created comprising of:

#### *Demographics*

The demographic questions required participants’ to account for their age, gender, ethnicity, and year of study and subject.

#### *Vignettes*

The presentation of case-vignettes is one of the most commonly used methods in establishing attitudes towards people with mental health issues (Swami, 2012; see Butler and Gillis, 2011). The participants read two vignettes depicting social interaction between peers in a

university setting (adapted from Matthews et al., 2013). The main character in both vignettes was male and exhibited behaviour typical of a person with ASD. One vignette was presented in university accommodation and one vignette was presented in a student society. For one of the vignettes, participants were informed that the protagonist has a clinical disorder (AS, ASD or Schizophrenia) and was above average intelligence. For AS and ASD the participants were also informed that these individuals “sometimes demonstrate problems in social interaction and appropriate communication.” For the control condition, the participants were informed that the person illustrated was a typical university student and was of above average intelligence.

*Positive and Negative Affect Scale (Watson, Clark & Tellegen, 1988)*

To measure affect, the participants completed the Positive and Negative Affect Scale (PANAS) after each vignette. This is the most frequently used instrument to assess positive and negative affect (Terracciano, McCrea & Costa, 2003). It is a 20-item self-report affect scale containing two subscales each consisting of ten items: positive affect (PA) and negative affect (NA). PA and NA are independent measures rather than on a continuum, therefore an individual can hold both positive and negative attitudes to one attitudinal object. PA reflects the extent to which the person feels excited, interested and enthusiastic. NA is a dimension of subjective distress, which suggests how irritable and hostile they feel. Items are rated on a 5-point Likert scale, from 1 (*not at all*) to 5 (*extremely*). The subscales are scored separately and results can range from 10-50, with higher scores representing more positive/negative affect. The PANAS has been found to be a good predictor of actual behaviour (Hepler & Albarracín, 2013).

*Autism-Spectrum Quotient Short (Hoekstra et al., 2011)*

The Autism-Spectrum Quotient Short (AQ-S) was used as a self-report measure of the participant's level of autistic traits. The AQ-S is an abridged version of the 50-item Autism Spectrum Quotient (Baron-Cohen et al., 2001). The shortened version was used as it is less demanding on participants' time and has been validated in three independent samples (Hoekstra et al, 2011). Participants were asked to rate 28 statements on a 4-point Likert scale from 1 (*definitely agree*) to 4 (*definitely disagree*). Total scores range from a minimum of 28 (indicating no autistic traits) and a maximum score of 112 (full endorsement of autistic traits).

Knowledge of ASD was indexed by asking participants four questions: 1) How would you rate your current level of ASD? ('never heard of it', 'know a little', 'know a lot', 'expert'); 2) How did you gain this knowledge? (e.g. 'experience', 'education', 'tv', 'internet'); 3) Do you have a family member with ASD? ('yes', 'no'); and 4) Do you have a friend/acquaintance with ASD ('yes', 'no').

## Design

Each participant completed the PANAS twice, once after reading each vignette. The vignettes were counterbalanced, half of each condition completed the clinical disorder vignette first and subsequently the typical student vignette. The other half completed the vignettes in the reverse order. In addition, for half the ratings the student accommodation vignette was associated with the clinical disorder and the student society with the typical student, and the other way around for the other half of the ratings. After rating the two vignettes, participants completed the AQ-S and an assessment of their knowledge of ASD. The study took approximately 20-30 minutes to complete. Ethical approval was obtained from the Departmental Ethics Committee.

Inspection of the data indicated there were three outliers (with normed z-scores above 3.29: one for positive affect, one for negative affect and one for AQ-S), which were removed and that the remaining the data were not normally distributed. Skewness and kurtosis values and Kolmogorov-Smirnov and Shapiro-Wilk tests of normality indicated that the results were not normally distributed. Consequently, non-parametric analyses were undertaken and medians reported in addition to means.

## Results

The initial analysis compared the affective responses of participants' for each clinical label. The descriptive statistics are shown in Table 2.

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Table 2 about here

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There were no significant differences in positive affective responses across all three clinical labels,  $\chi^2(2, N = 117) = 1.09, p > .05$ . Similarly, no significant differences were found between negative affective responses across all three clinical labels,  $\chi^2(2, N = 118) = .959, p > .05$ .

Next the affective responses from the clinical (AS, ASD, Schizophrenia collapsed) were compared with the responses to the typical student, see Table 3.

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Table 3 about here

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This revealed a statistically significant difference in affective responses between the clinical group and typical group for positive affect,  $z = -4.89, p < .05$  with a small to medium effect size (Cohen's  $d = 0.4$ ). Participants rated more positively in the clinical group compared with the typical group. Similarly, a statistically significant difference was found for negative affective responses,  $z = -2.89, p < .05$  with a very small effect size was found (Cohen's  $d = 0.1$ ). Participants rated less negatively in the clinical group than the typical group. Having knowledge of ASD did not impact upon the results and there were no correlations with AQ-S score (all  $p > .05$ )

### Discussion

The current brief report sought to investigate the affective responses of college students towards potential peers with a clinical label, distinguishing between AS and ASD (and Schizophrenia). The results showed no significant differences between the student's positive or negative affective responses towards the clinical labels AS and ASD. Additionally, no significant differences were found with the comparison clinical label 'Schizophrenia'. This suggests that the clinical label used does not influence student positive or negative affective responses. There was, however, a significant difference between the clinical group and the typical group, affective responses were significantly more positive and less negative towards the clinical disorder vignette compared to the typical college student vignette. This suggests that students have a more positive and less negative response towards peers who display



behaviour typical of ASD when they are aware of a diagnosis compared to no awareness of a clinical diagnosis. This was found to be unrelated to self-reported levels of autistic traits and knowledge of ASD.

The implications of these findings are that replacing the AS label with ASD does not impact upon peer perceptions for college students in a university context. Secondly, the results suggest that awareness of a diagnosis can result in more positive (and less negative) responses to ASD-type behaviour. This would suggest that, despite concerns over disclosing diagnostic status (Adreon & Durocher, 2007), disclosure can be beneficial within the university context.

These results appear to contrast with previous qualitative research suggesting that ASD may have more stigma attached to it than AS (Calzada et al., 2011; Kite et al., 2012). These differences may be due to the examination of different population groups, the previous studies focused on people with ASD, parents and professionals whereas the current study focussed upon potential peers. Whilst the diagnostic label of AS may have utility for those affected (Mandy, 2013), the ASD label may not represent a salient change for peers at university. The results also showed student affective responses towards Schizophrenia did not differ from AS and ASD, and Schizophrenia has been argued to be more widely stigmatised than many other mental health problems (Graves et al., 2005). This result suggests that individuals with Schizophrenia are not more highly stigmatised than individuals with AS or ASD within a student population. It is possible that participants were responding in a socially desirable manner, although the anonymity of the online environment has been found to minimise such effects (Martin & Nagao, 1989) and previous research has suggested that social desirability bias does not affect attitudes towards mental health issues (Wolkenstein & Meyer, 2009).

The finding of a more positive response to behaviour when aware of a clinical diagnosis is consistent with Matthews et al. (2013), who found American students' attitudes towards peers with ASD were more positive when the participants were informed of the diagnosis. This finding also has important practical implications for college students with ASD. It implies that within a university environment, disclosing their diagnosis to peers could be beneficial as this study suggests they would experience more positive and less negative affective responses toward behaviour typical of ASD. This may help students with ASD

reduce their level of perceived public stigma. People with mental health issues who feel that they are widely stigmatized are less likely to seek help (Biddle, Donovan, Sharp, & Gunnell, 2007; Corrigan, 2004). This study suggests that disclosure of ASD diagnosis may reduce the perception of negative responses which then may encourage more help-seeking behaviour at university. This is consistent with many university Disability Support Services who generally recommend students disclose their disabilities as it allows additional support to be put in place (Edwards & Miller, 2013; Hughes, Milne, McCall & Pepper, 2010).

This study was based upon college students but there is a suggestion that attitudes to mental health may be improving amongst the general public (Evans-Lacko, Henderson & Thornicroft, 2013; see also Butler and Gillis, 2011). In relation to prior knowledge, the results suggest that this was not a factor that influenced affective responses to clinical disorders. This result contradicts previous research suggesting that greater knowledge of the mental health issues fosters more positive attitudes (Mayville & Penn, 1998; Nevill & White, 2011). Despite being used in previous research, the questions used in the present study may be an imperfect proxy for knowledge. For example, it neither measures the degree of exposure these participants had to a friend/relative, or the participants' actual understanding of ASD (Nevill & White, 2011). The limitation of the measures used needs to be borne in mind, as does the college-based nature of the sample and the online nature of the methodology. The data was interrogated to investigate whether multiple entries had been made by a single participant, but there was no evidence that this had occurred. Overall, however, the results are consistent with the formal advice from most universities that disclosure of clinical conditions by students should be encouraged.

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Table 1: Demographic information of participants

	<i>N</i>	Percent
<b>Gender</b>		
Male	55	45.8%
Female	65	54.2%
<b>Age</b>		
17-19 years	17	14.1%
20-22 years	83	69.1%
23-25 years	16	13.3%
26+ years	4	3.3%
<b>Ethnicity</b>		
White	104	86.6%
Mixed	2	1.6%
Asian	4	3.3%
Black	6	5.0%
Other	4	3.3%
<b>Year Group</b>		
1 <sup>st</sup> year	13	10.8%
2 <sup>nd</sup> year	13	10.8%
3 <sup>rd</sup> year	26	21.7%
4 <sup>th</sup> year	51	42.5%
5 <sup>th</sup> year	3	2.5%
Postgraduate	13	10.8%
<b>Course</b>		
Engineering	18	15.0%
Physical Sciences	23	19.0%
Social Sciences	35	29.0%
Other	44	37.0%

Table 2: Descriptive statistics for clinical disorder conditions

	Asperger's Syndrome Condition			Autism Spectrum Disorder Condition			Schizophrenia Condition		
	<i>n</i>	<i>Mdn</i>	<i>M (SD)</i>	<i>n</i>	<i>Mdn</i>	<i>M (SD)</i>	<i>n</i>	<i>Mdn</i>	<i>M (SD)</i>
PA	40	17.50	17.45 (5.56)	39	15.00	17.72 (6.51)	38	15.00	17.13 (7.08)
NA	40	15.75	15.75 (4.66)	39	16.00	16.95 (6.49)	38	16.00	16.49 (4.49)

*Note:* PA = positive affect, NA = negative affect



Table 3: Descriptive statistics of clinical group and typical group.

	Clinical Group			Typical Group		
	<i>n</i>	<i>M (SD)</i>	<i>Mdn</i>	<i>n</i>	<i>M (SD)</i>	<i>Mdn</i>
Positive Affect	117	17.54 (6.35)*	16.00*	117	15.42(4.48)*	14.00*
Negative Affect	118	16.42 (5.26)*	16.00*	117	17.21(5.57)*	16.00*

*Note:* \* $p < .05$